Intel Developer Forum

Fall 2002

intel

Advancing the Digital Universe

Welcome to the Intel Developer Forum Conference Fall 2002

Frank Spindler
Vice President
Corporate Technology Group

Intel Developer Forum Fall 2002

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Compaq iPAQ* Handheld

- Win a Compaq iPAQ* Handheld Computer
- Drawing at 8:00 a.m. Tuesday and Thursday
- Prize to be awarded at that time
- Get your raffle ticket at door of keynote room
- Tickets valid for same day drawing only



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*Other names and brands may be claimed as the property of others

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Fall IDF 2002 is Wireless

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*Other names and brands may be claimed as the property of others

Intel Developer Forum Fall 2002

Fall IDF is Wireless!

- 802.11a and 802.11b wireless LAN coverage in concourse & session rooms
- Available for laptops and Pocket PC* devices
- Free internet access!
- Wireless cards and Compaq* iPAQ PDAs for sale at the wireless connectivity solution center (concourse level)





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Be connected "anytime, anywhere"

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Intel Developer Forum Fall 2002

Intel Developer Forum

Fall 2002

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Technology Showcase

- Talk with experts from more than 140 leading computing and communications companies
- See the latest technology products and demos
- Enjoy complimentary food and drinks

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Monday	5:30 to 7:30 p.m.
Tuesday	12:30 to 2:30 p.m. 5:00 to 7:30 p.m.
Wednesday	12:30 to 2:30 p.m.

IDF Conference Concert

- Featuring “Super Diamond”
- A high energy tribute to Neil Diamond
- Hear favorites like ...
 - "Cherry Cherry“
 - "Cracklin' Rosie"
 - "Sweet Caroline."



IDF Conference Concert

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- A high energy tribute to Neil Diamond
- Hear favorites like ...
 - "Cherry Cherry“
 - "Cracklin' Rosie"
 - "Sweet Caroline."



Tuesday, 8 – 10 p.m.
San Jose Civic Auditorium

IDF attendees must show their conference badge at entrance

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Intel Developer Forum Fall 2002

Meet the Engineers Networking Reception

- Network with Intel fellows, engineers, and colleagues
- Hosted by Eric Mentzer, VP and CTO, Intel Communications Group
- All IDF full conference attendees are welcome



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Wednesday, 5 – 7 p.m.
Club Regent, Fairmont Hotel

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Intel Developer Forum
Fall 2002

See William Shatner at IDF !

- Technology Q&A session (not a book signing) with William Shatner and Chip Walter
- Authors of *Star Trek: I'm Working on That: A Trek from Science Fiction to Science Fact*
- Buy the book at the IDF Bookstore



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- Authors of *Star Trek: I'm Working on That: A Trek from Science Fiction to Science Fact*
- Buy the book at the IDF Bookstore



Thursday 8:00 a.m. at Keynote and
Thursday 12:00 – 1:00 p.m.
Room B, San Jose Convention Center

Intel Developer Forum

Fall 2002

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Client Day

Louis Burns
Vice President & Co-General Manager
Desktop Platforms Group

Anand Chandrasekher
Vice President & Co-General Manager
Mobile Platforms Group

Ron Smith
Senior Vice President & General Manager
Wireless Computing and Communications Group

Innovation Drives Demand

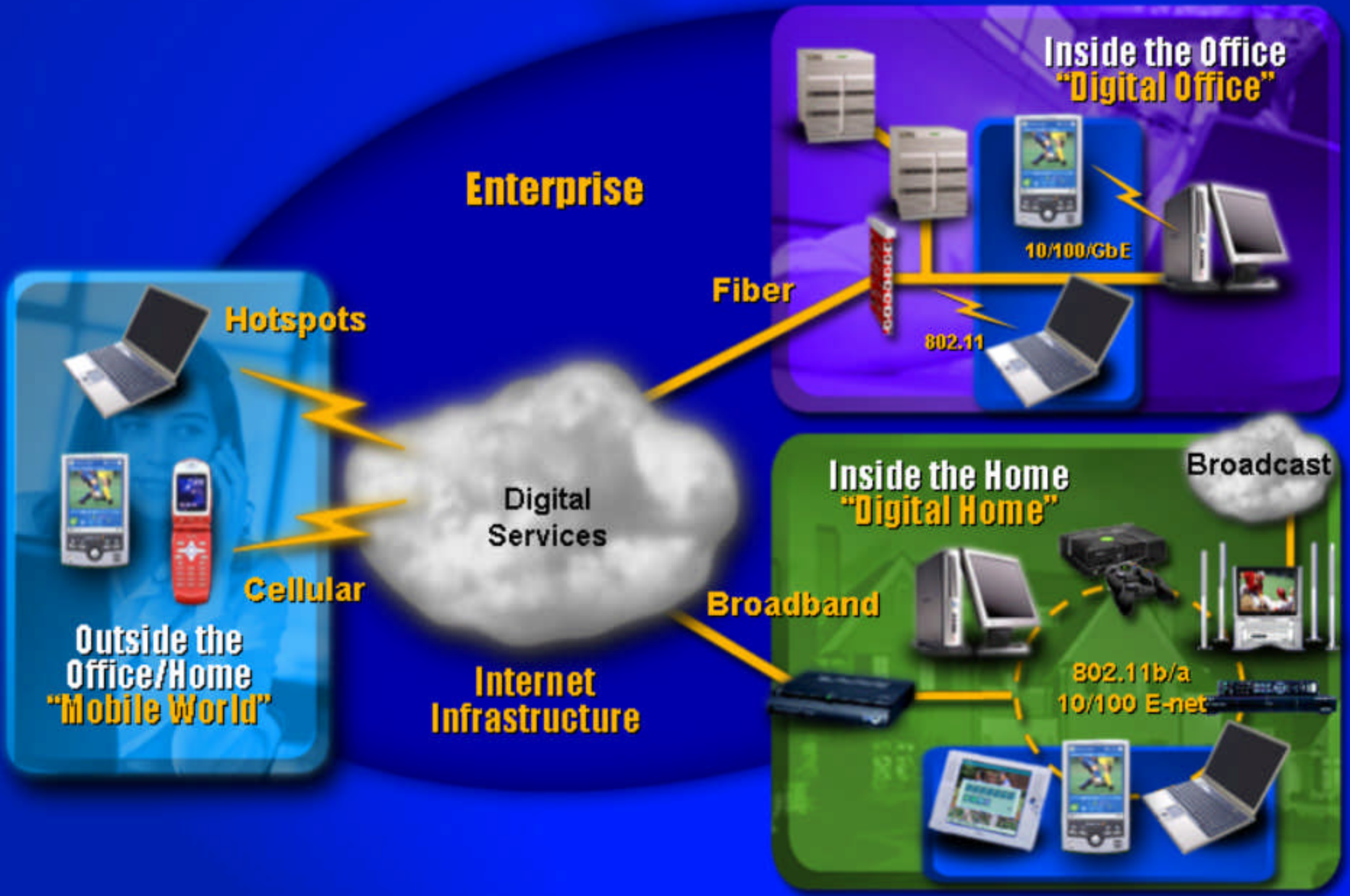


Our Opportunity . . .



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Any Device, Any Time, Anywhere

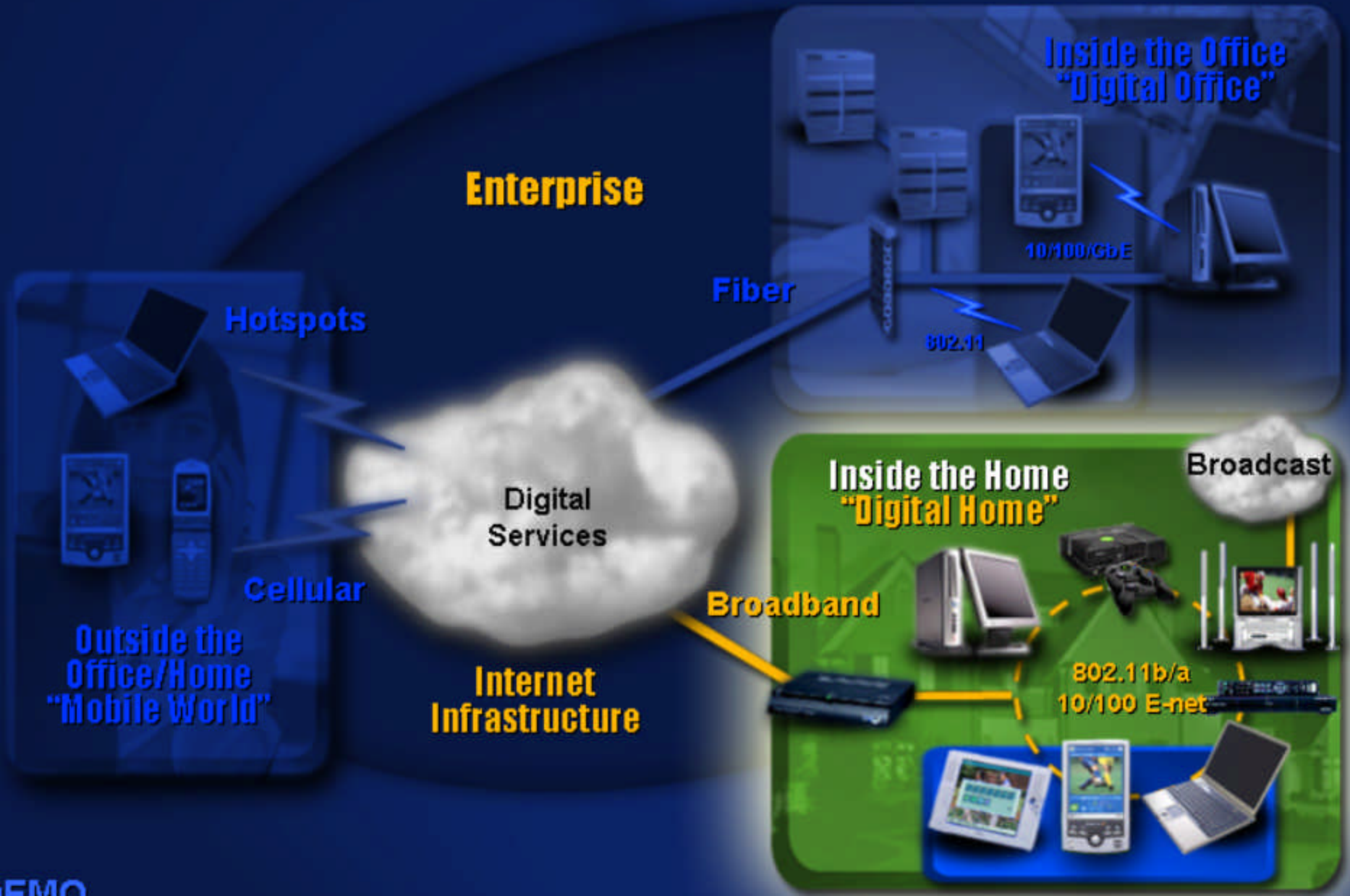


Creating the Any Device, Anytime, Anywhere World



- Vision
- Industry Collaboration
- Standards
- Products

Digital Home Vision




• Vision
• Industry Collaboration
• Standards
• Products

Industry Collaboration: Sony



Industry Collaboration: Microsoft



Mike Toutonghi

Corporate Vice President,
Microsoft Windows e-Home

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• Vision
• Industry Collaboration
• Standards
• Products

Standards

- Applications and Services
- Digital Rights Management Framework
- Media Formats and Data Exchange
- Device Discovery and Control
- Network Protocols
- Physical Network Media

Standards

Applications and Services

Digital Rights Management Framework

Media Formats and Data Exchange

Device Discovery and Control

Universal
Plug and Play (UPnP)

Network Protocols

Internet Protocol (IP)

Physical Network Media

Ethernet (802.x)
Wired & Wireless

Interoperable Network Across Computing and CE Devices


• Vision
• Industry Collaboration
• Standards
• Products

Products

- Extended Wireless PC is the first step in Digital Home
- Digital Media Adapter reference design available now
- Industry leaders on track to deliver first generation products in 2003





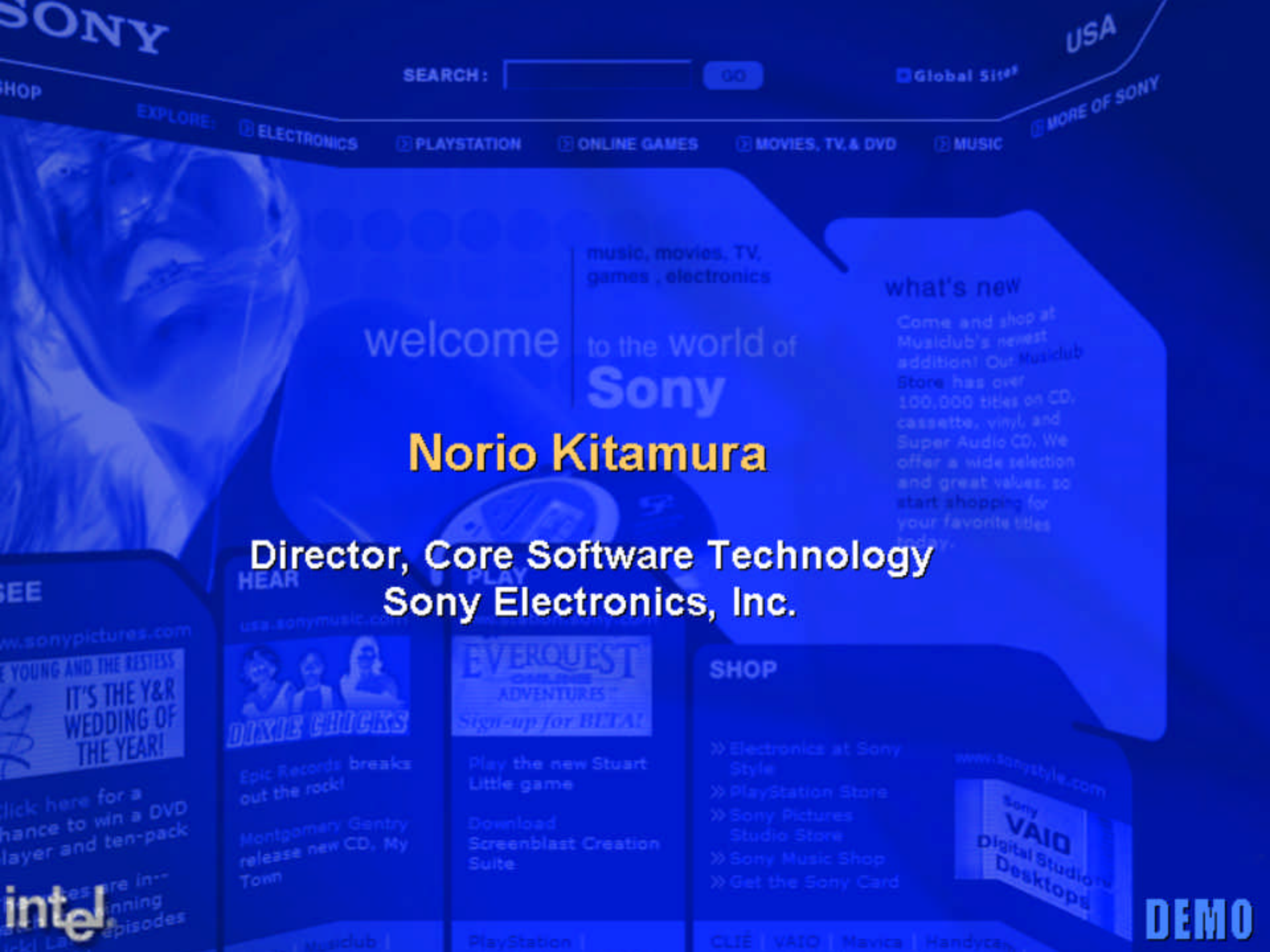








VIDEO


SONY
USA
SEARCH :
Global Sites
SHOP
EXPLORE:
ELECTRONICS
PLAYSTATION
ONLINE GAMES
MOVIES, TV & DVD
MUSIC
MORE OF SONY
music, movies, TV, games, electronics
welcome to the world of Sony
what's new
Norio Kitamura
Director, Core Software Technology
Sony Electronics, Inc.
HEAR
PLAY
SHOP
DIXIE CHICKS
EVERQUEST
ADVENTURES
Sign-up for BETA!
IT'S THE Y&R WEDDING OF THE YEAR!
VAIO
Digital Studio
Desktops
intel
DEMO

2002-2003 Platforms

- Intel® Pentium® 4 processor with HT Technology 3.06Ghz will launch in Q4 2002
- HT Technology delivers immediate performance benefits for both business and consumers
- 2003 Next Generation Desktop Platform: Prescott
 - On track to be delivered in 2H '03
 - Based on enhanced Intel® NetBurst™ Micro-architecture
 - Industry leading 90nm process
 - 2003 Prescott: Continued performance scaling with HT Technology

Outstanding Performance
Innovative Technology

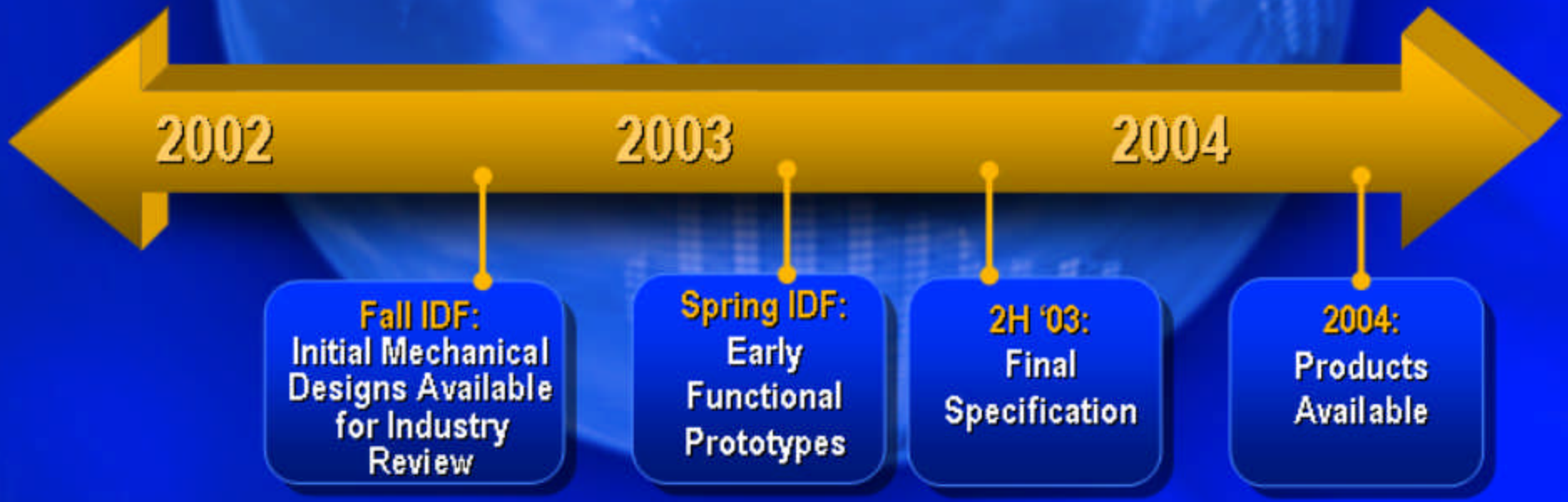
Design Innovation: Big Water

Enables a wider variety of performance desktop designs

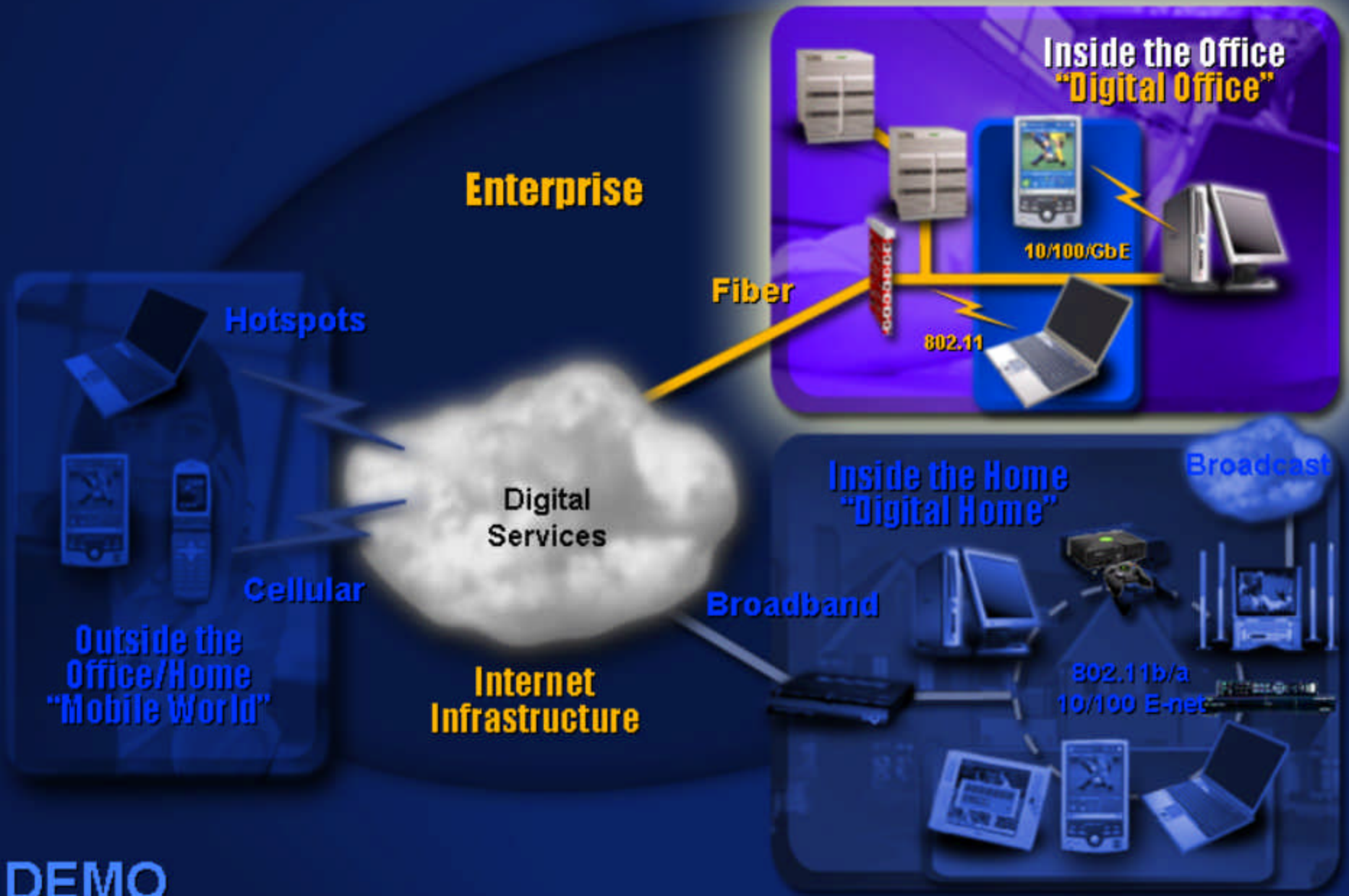
- Scaleable form factor design
- PCI Express™ module for ease of use and manageability advantages

Advanced design ingredients

- Redesigned core layout for superior power, cooling, feature loading
- I/O design innovations through PCI Express

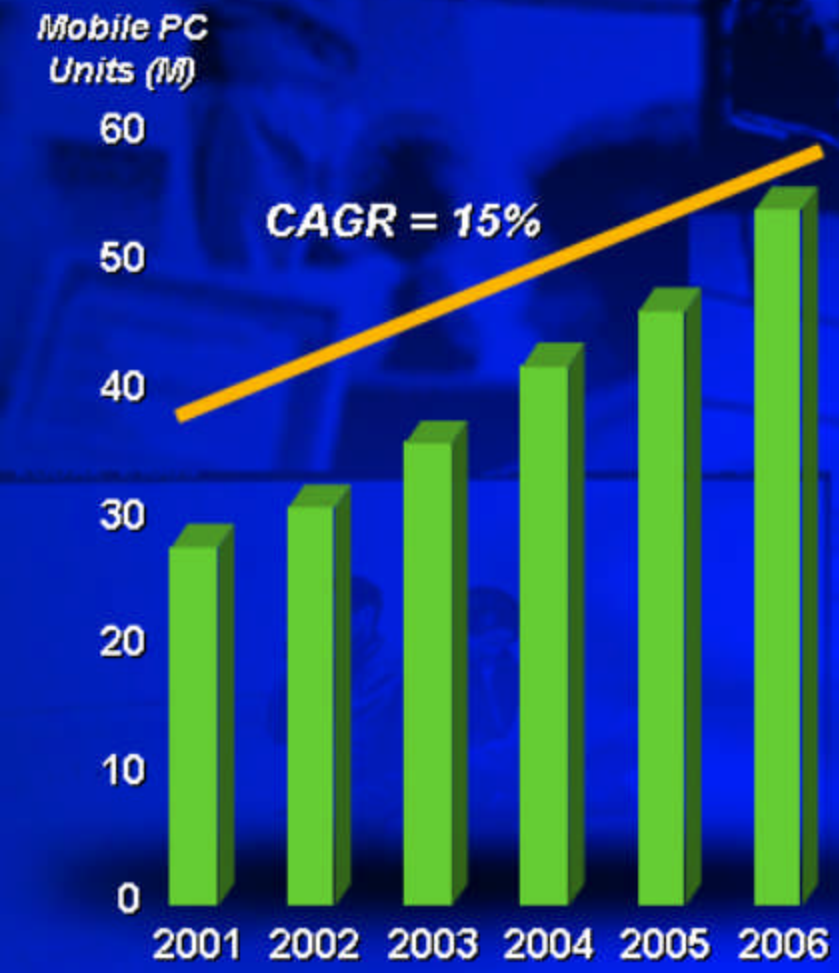


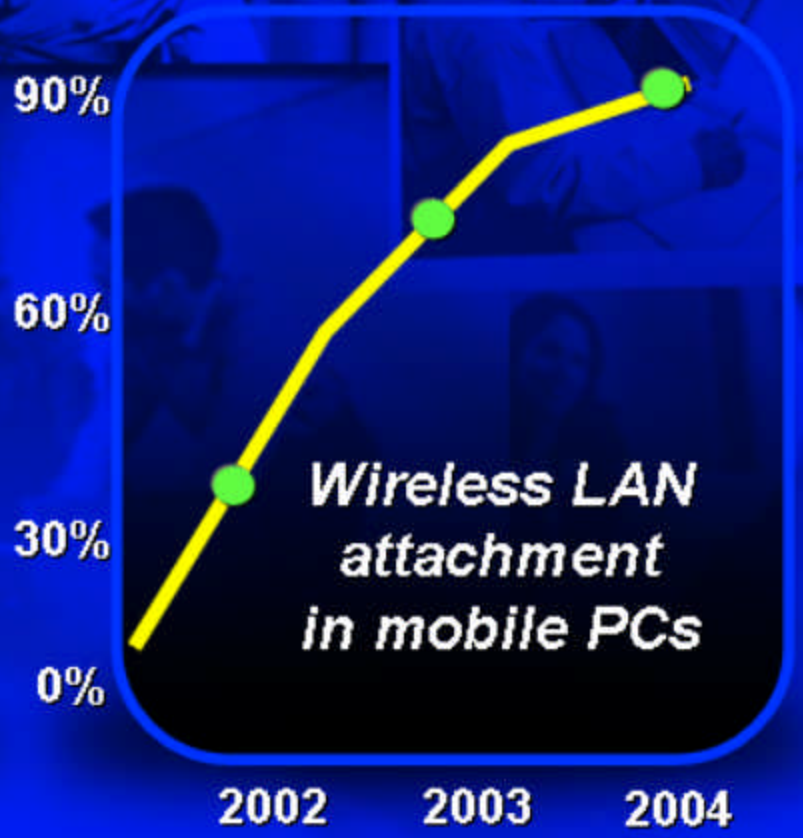
Digital Office Vision



DEMO

The Growth Trend is Wireless Mobility





Mobile User Segmentation Continues

Intel Products Optimized for User Needs



Banias Platform

First to Deliver on All Four Mobility Vectors

Promise Is:
Fully validated platform delivering mobility

Improved thermals	4. Form Factor innovation
Dual-band WLAN	3. Connectivity
Banias CPU Odem / Montara-GM chipset	2. Battery life
Banias CPU	1. Performance

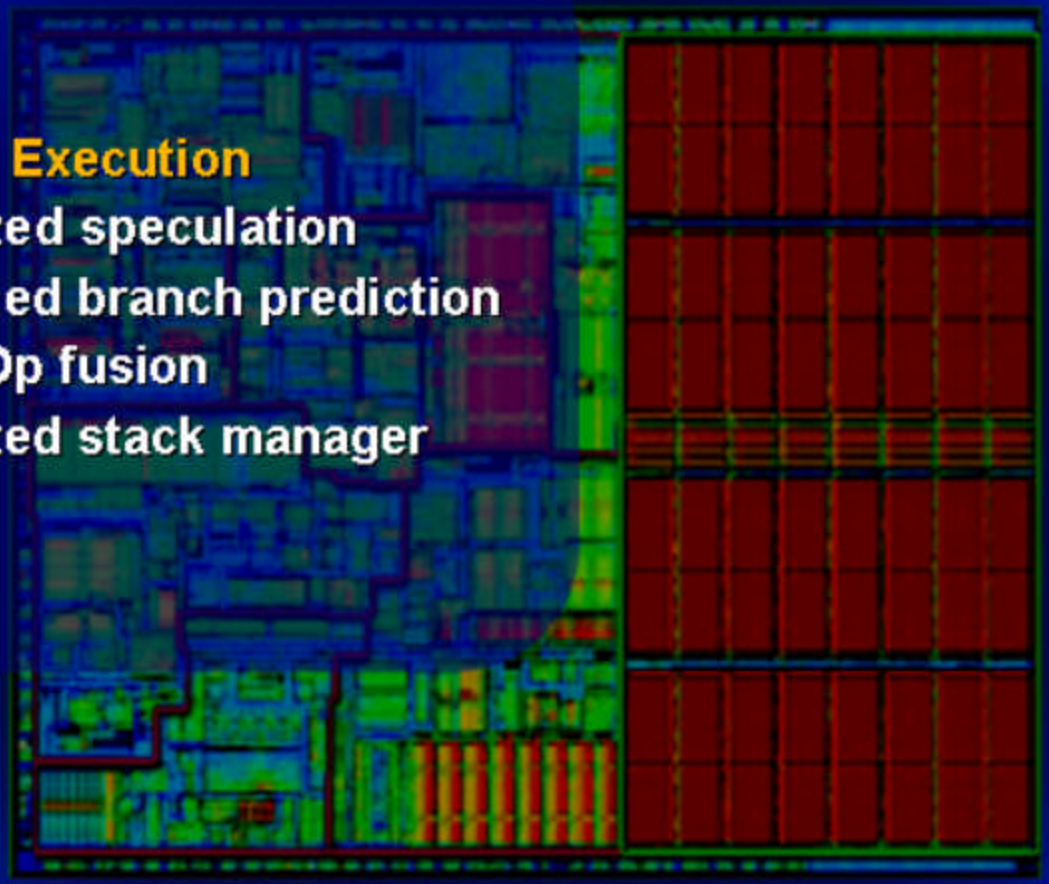
Promise Was:
CPU



MOBILITY

New Banias Micro-Architecture
Optimized for Performance and Power

Banias: 77M transistors

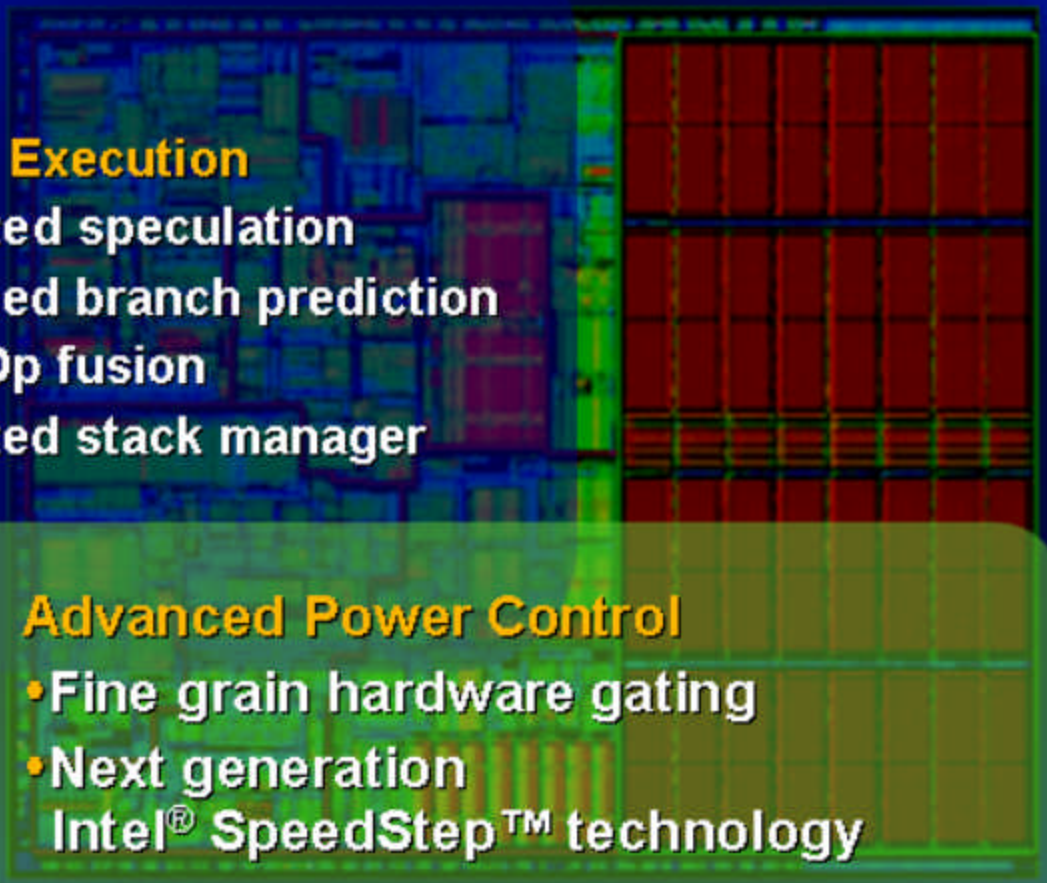


Efficient Execution

- Optimized speculation
- Advanced branch prediction
- Micro-Op fusion
- Dedicated stack manager

New Banias Micro-Architecture
Optimized for Performance and Power

Banias: 77M transistors

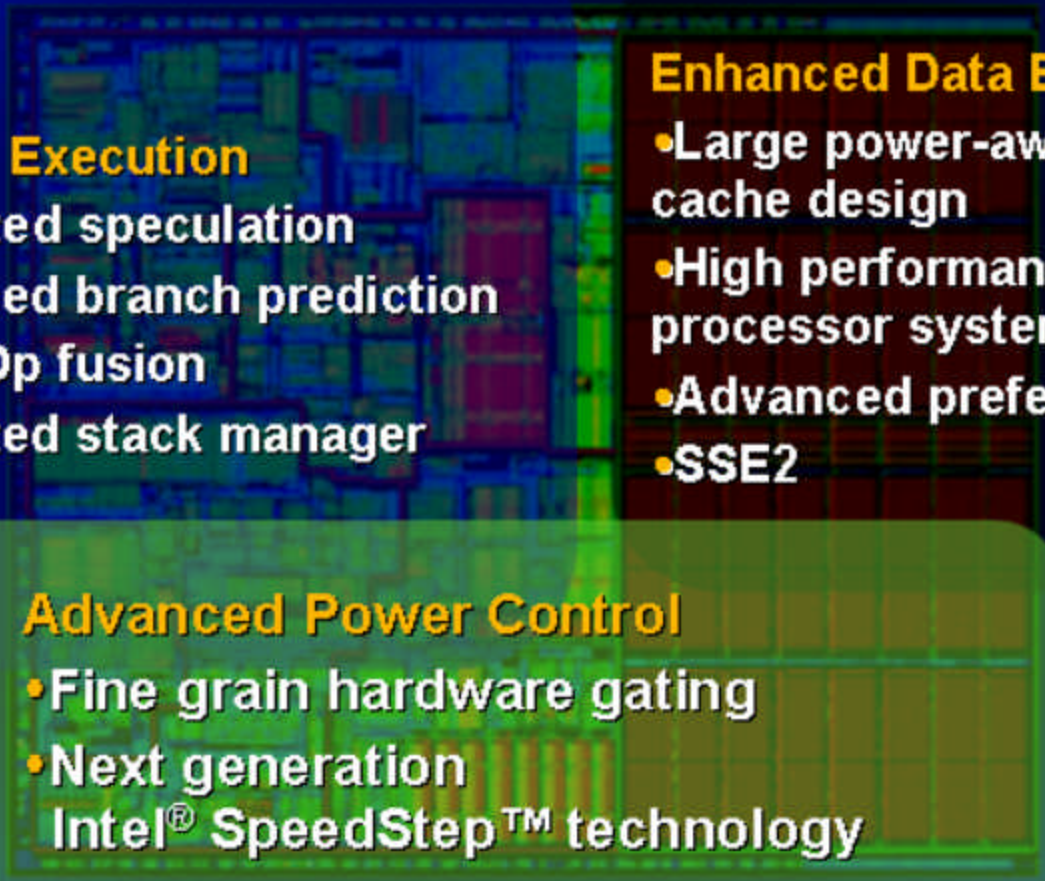


Efficient Execution
- Optimized speculation
- Advanced branch prediction
- Micro-Op fusion
- Dedicated stack manager

Advanced Power Control
- Fine grain hardware gating
- Next generation Intel® SpeedStep™ technology

New Banias Micro-Architecture
Optimized for Performance and Power

Banias: 77M transistors



Efficient Execution
- Optimized speculation
- Advanced branch prediction
- Micro-Op fusion
- Dedicated stack manager

Enhanced Data Bandwidth
- Large power-aware cache design
- High performance processor system bus
- Advanced prefetch
- SSE2

Advanced Power Control
- Fine grain hardware gating
- Next generation Intel® SpeedStep™ technology

Advanced Branch Prediction

Smarter Prediction For Higher Performance At Lower Power



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Micro-Ops Fusion

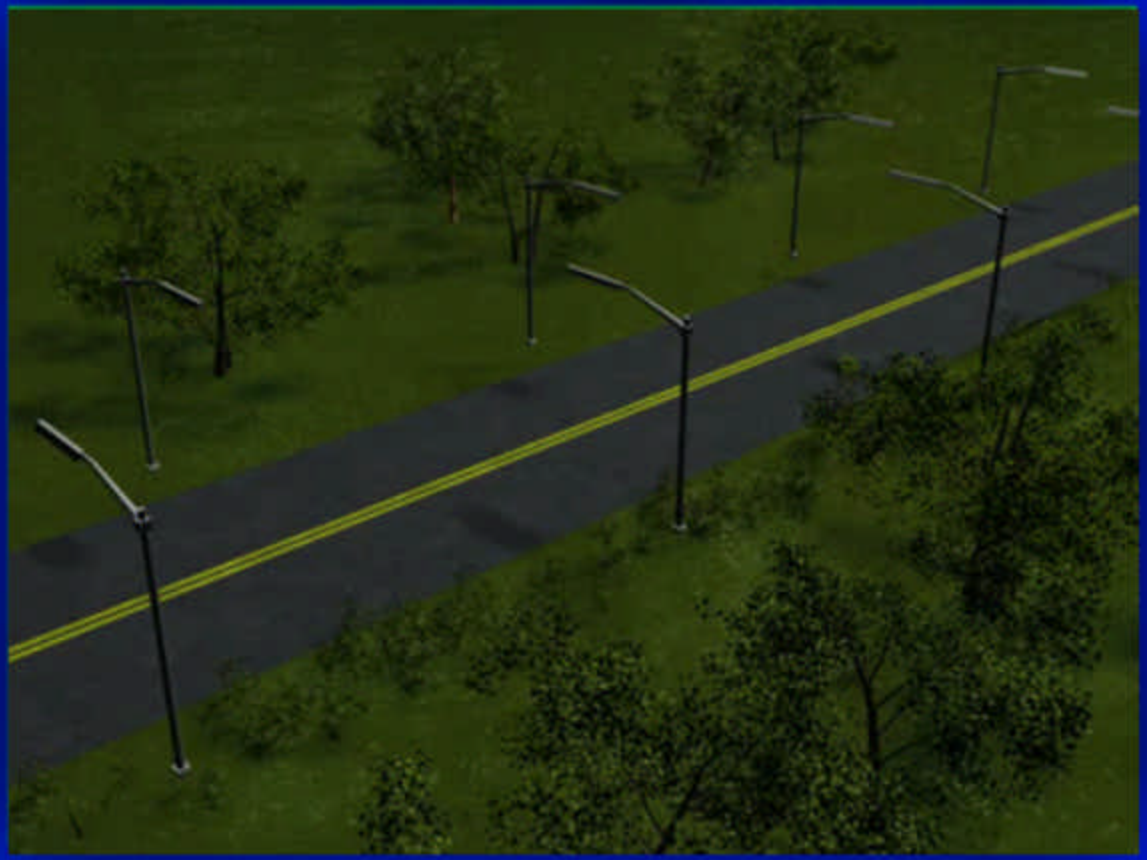
Uses Fewer CPU Resources to Execute Operations



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Power-Optimized Processor System Bus

Lower Power Through Reduced Voltage Swing and Tighter Buffer Management



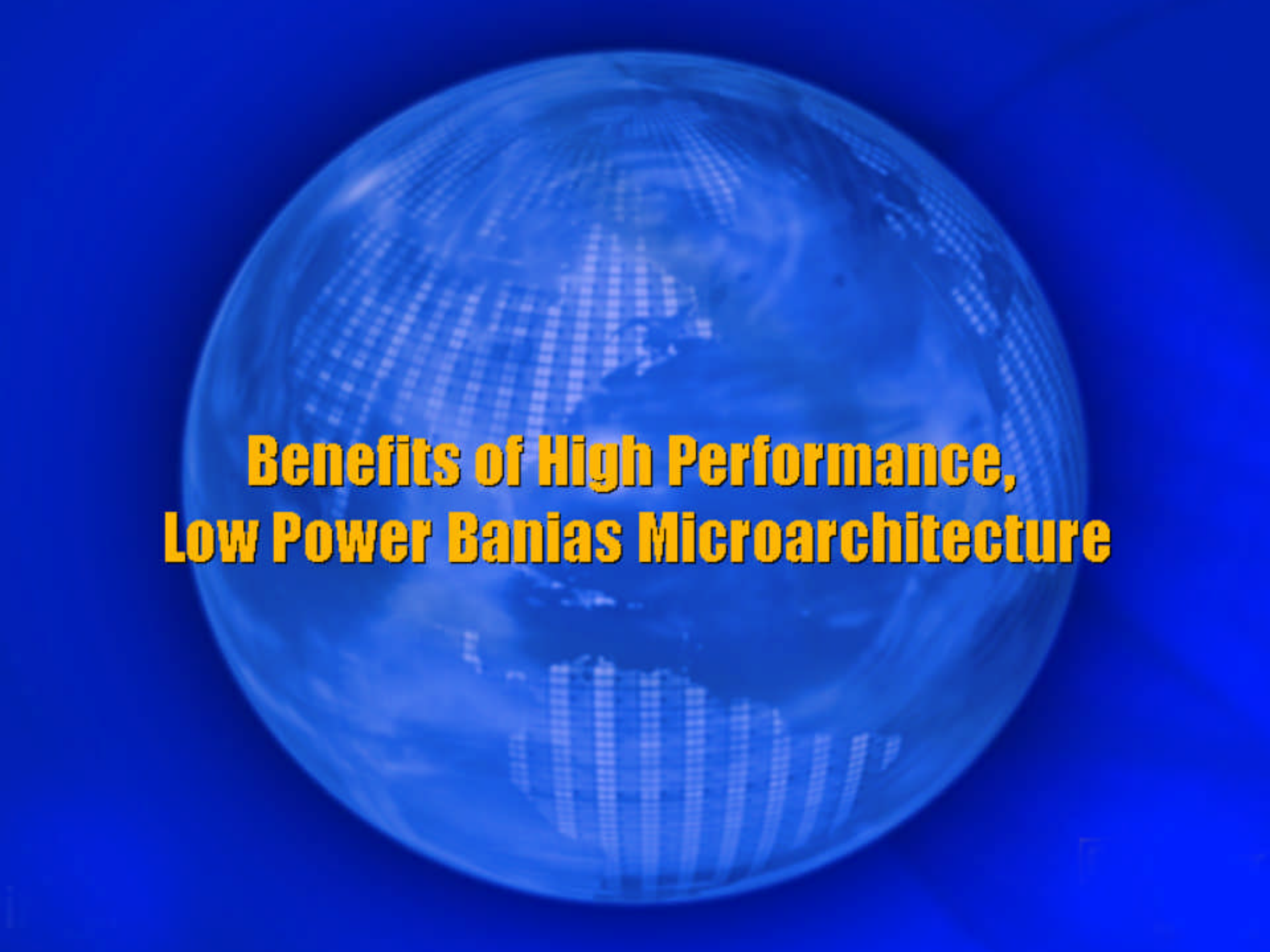
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Dedicated Stack Manager

Executes Instructions Faster



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Benefits of High Performance,
Low Power Banias Microarchitecture

Integrating Wireless to Accelerate the Turn to Mobility



Performance

Flexibility

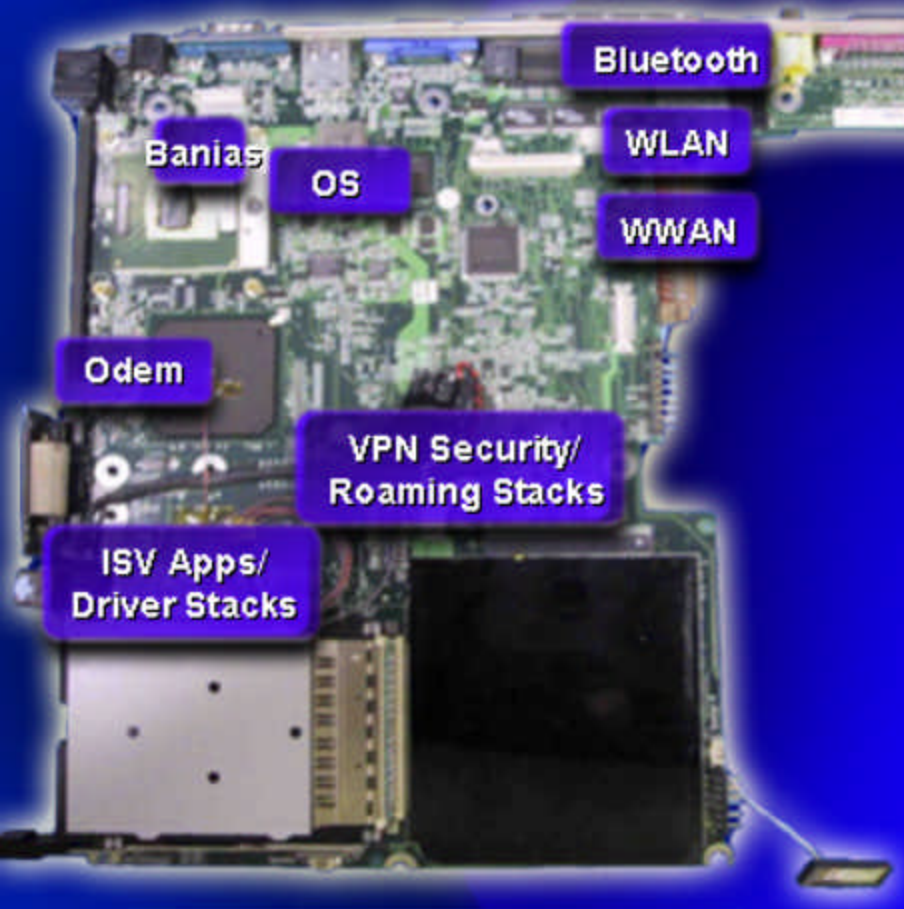
Manageability

Compatibility

Enhanced
Security Support

Extending Validation to Wireless

Full Platform Tuned for Mobility



- Delivering reliable wireless experience
- Validating with Industry leaders
- Enabling mobile-aware applications

VeriSign The Value of Trust™ | Check Point Experience Your Security Source | iPass

Enabling Sleek, Lightweight Banias Platforms

Mobile Technology Innovation

- Improved thermal solutions
- Smaller packaging
- Increased integration

Leads to

Thinner, Lighter Mobile PCs at launch



Future Innovation:
Mobile Internet PC Concept Platforms

Program Goals:

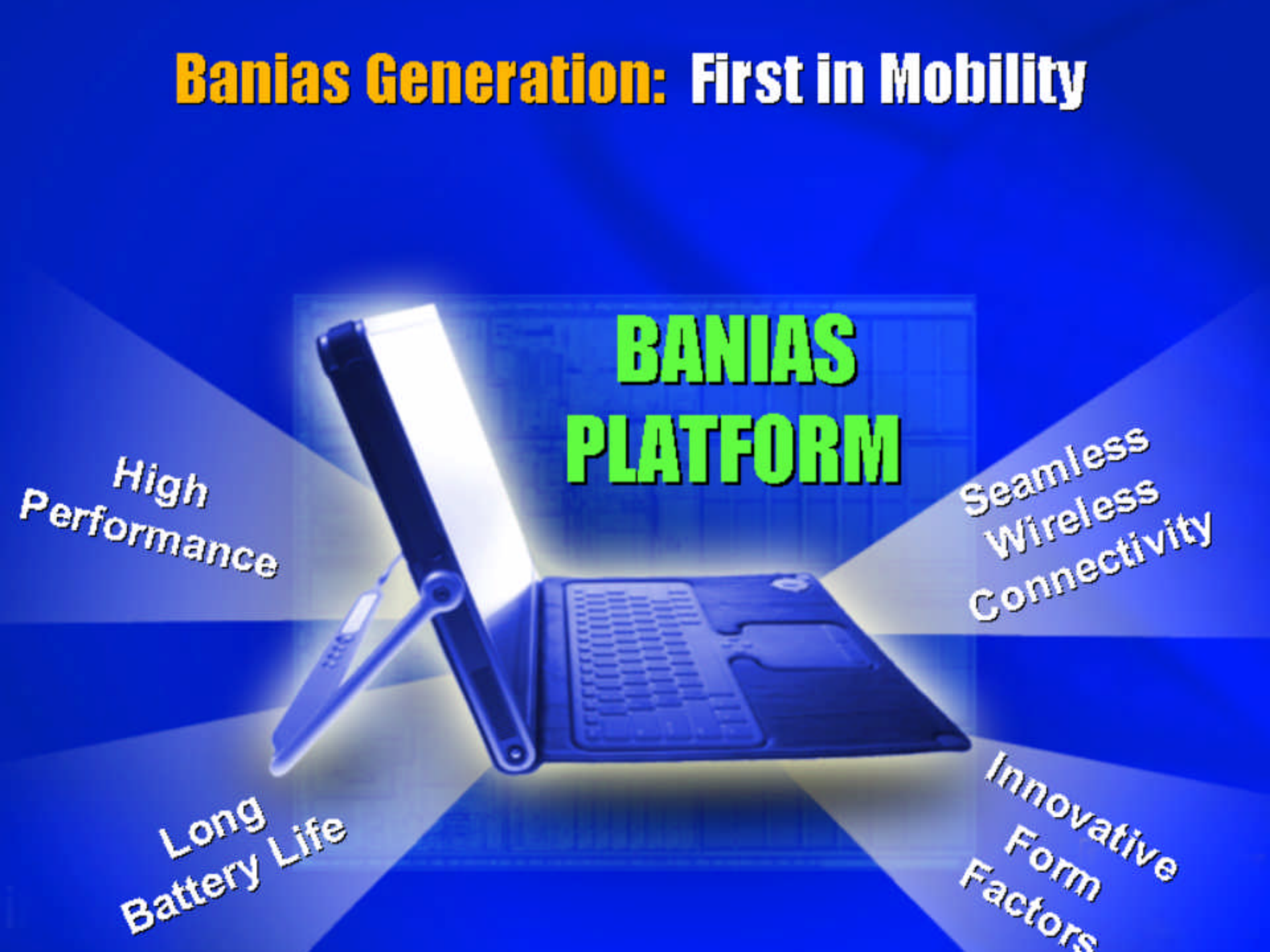
- Accelerate innovation
- Drive industry involvement
- Deliver platform guidelines annually

Extended Battery Life Initiative

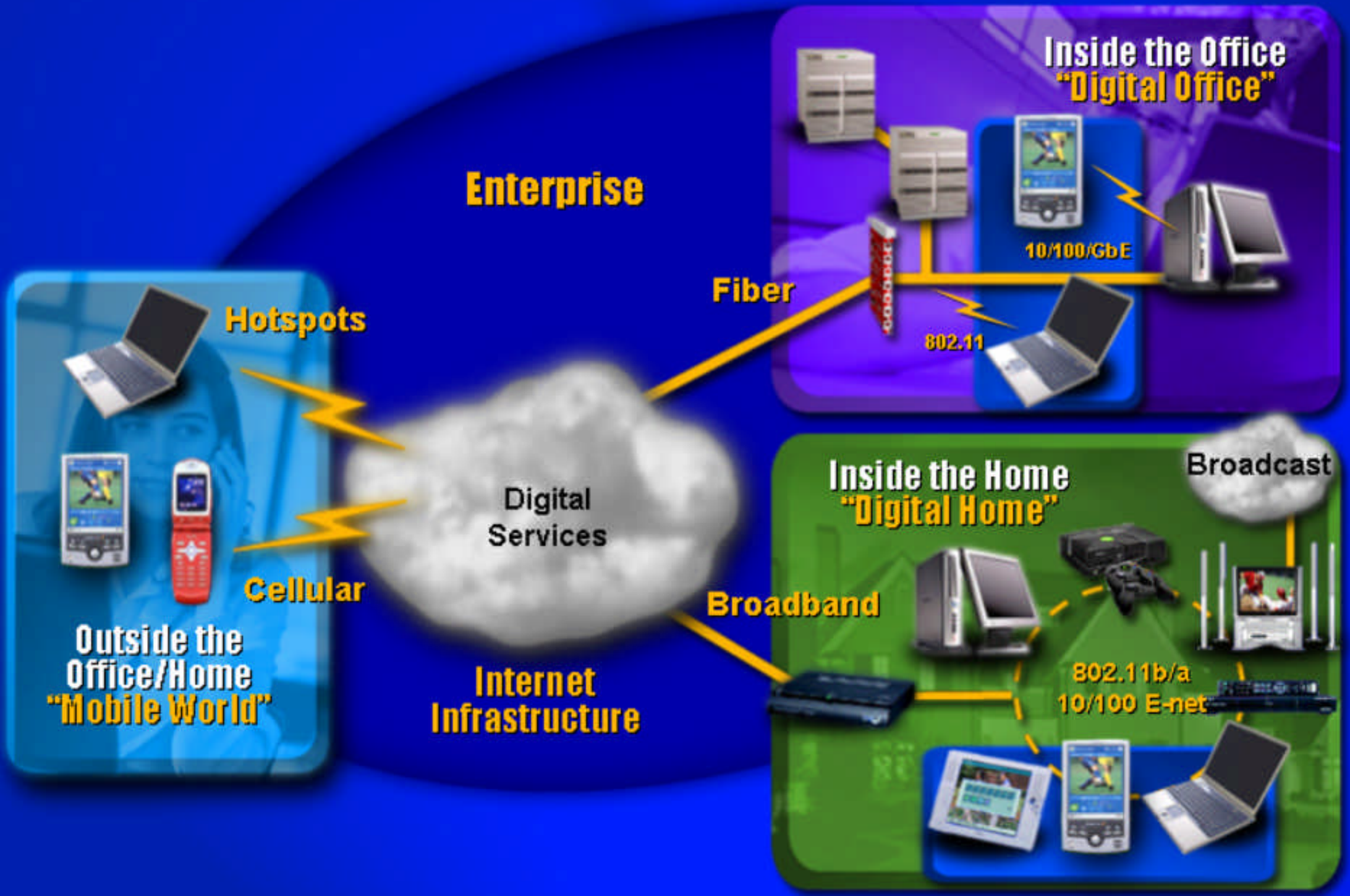
- Drive toward 8-hour battery life goal
- Enable key technologies for:
 Displays, Batteries, Fuel Cells, etc.



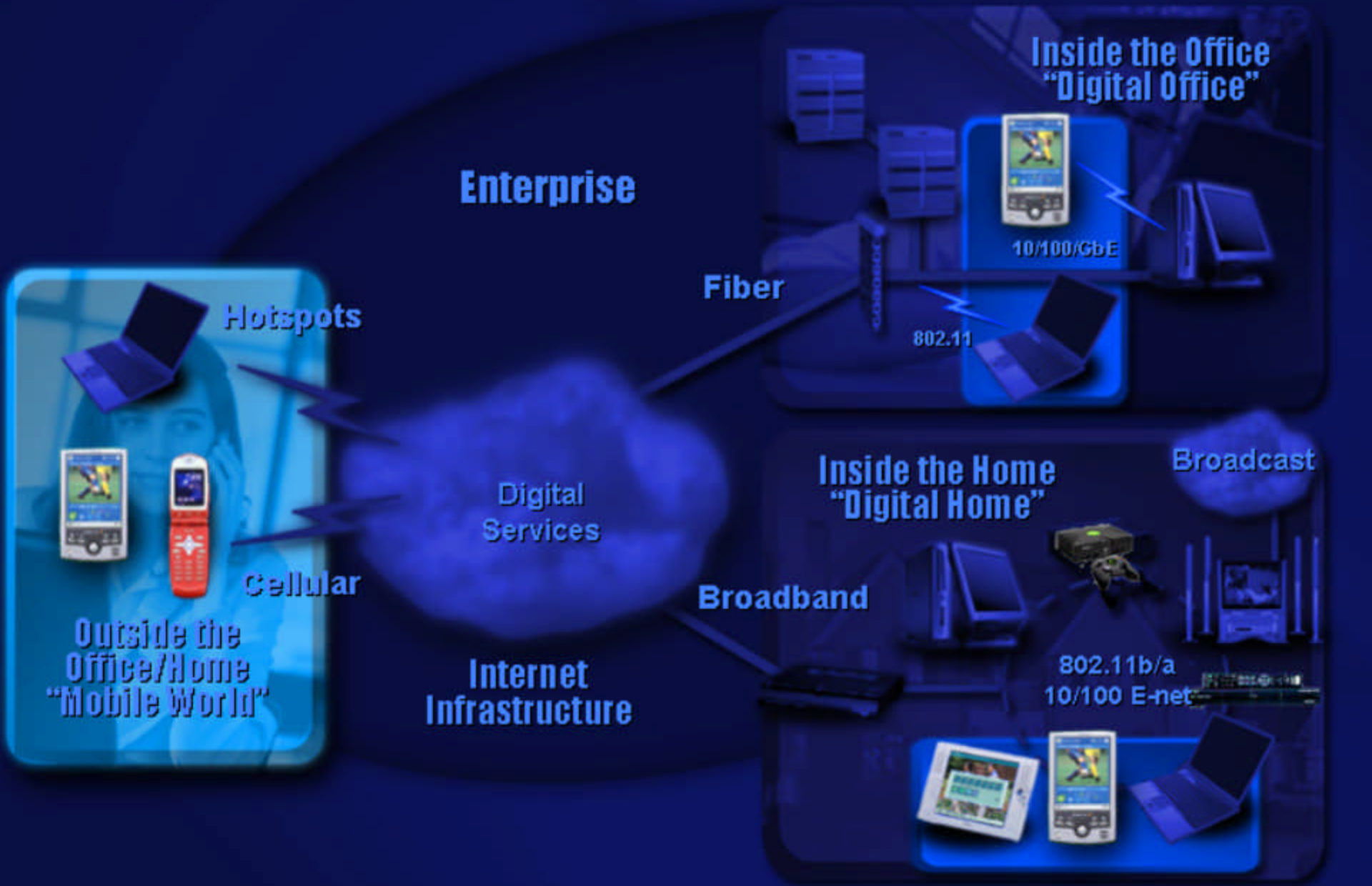
Banias Generation: First in Mobility



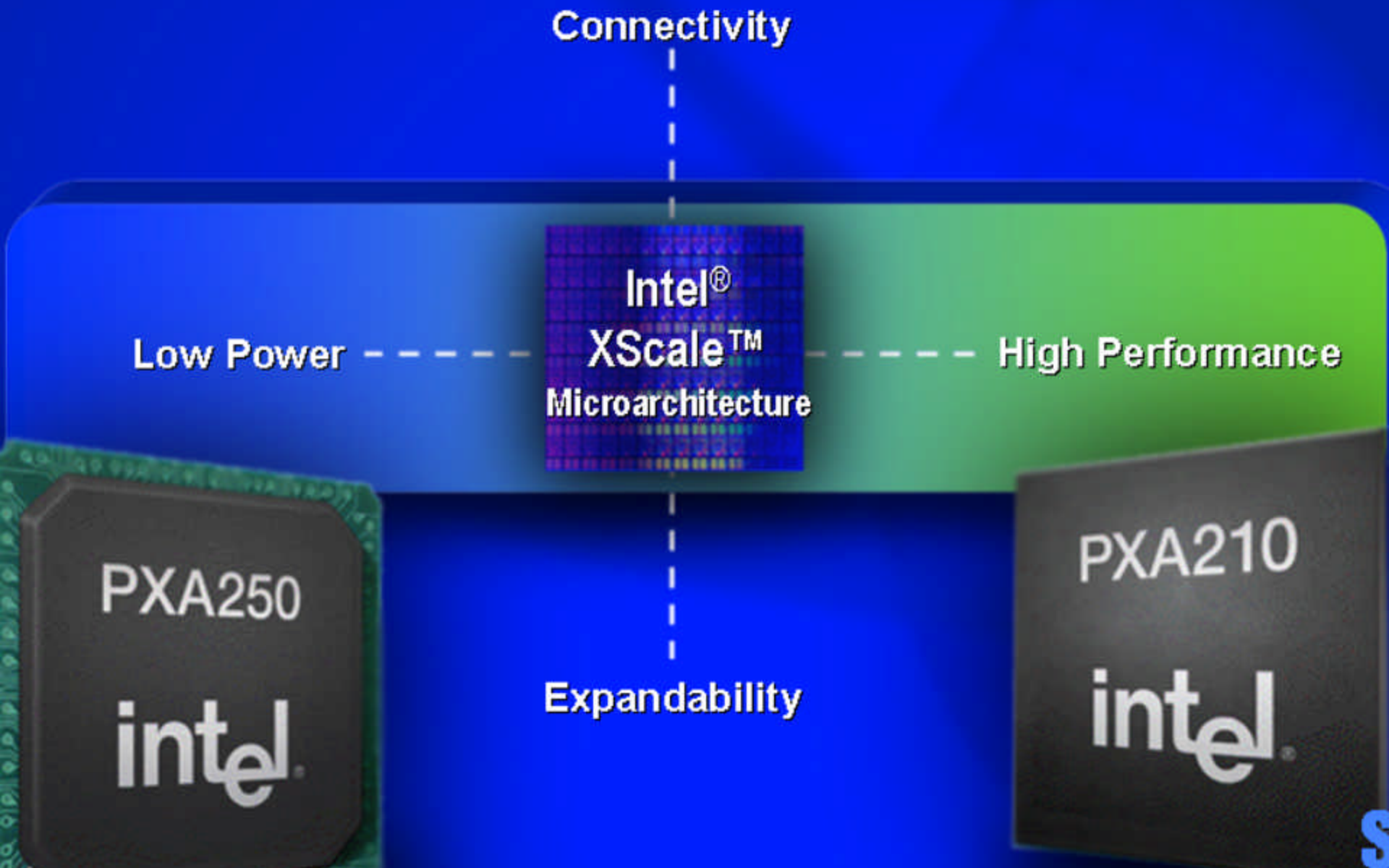
Any Device, Any Time, Anywhere



On the Go


Enterprise
Inside the Office
"Digital Office"
10/100/GbE
Fiber
802.11
Hotspots
Digital
Services
Cellular
Outside the
Office/Home
"Mobile World"
Internet
Infrastructure
Broadband
Inside the Home
"Digital Home"
Broadcast
802.11b/a
10/100 E-net

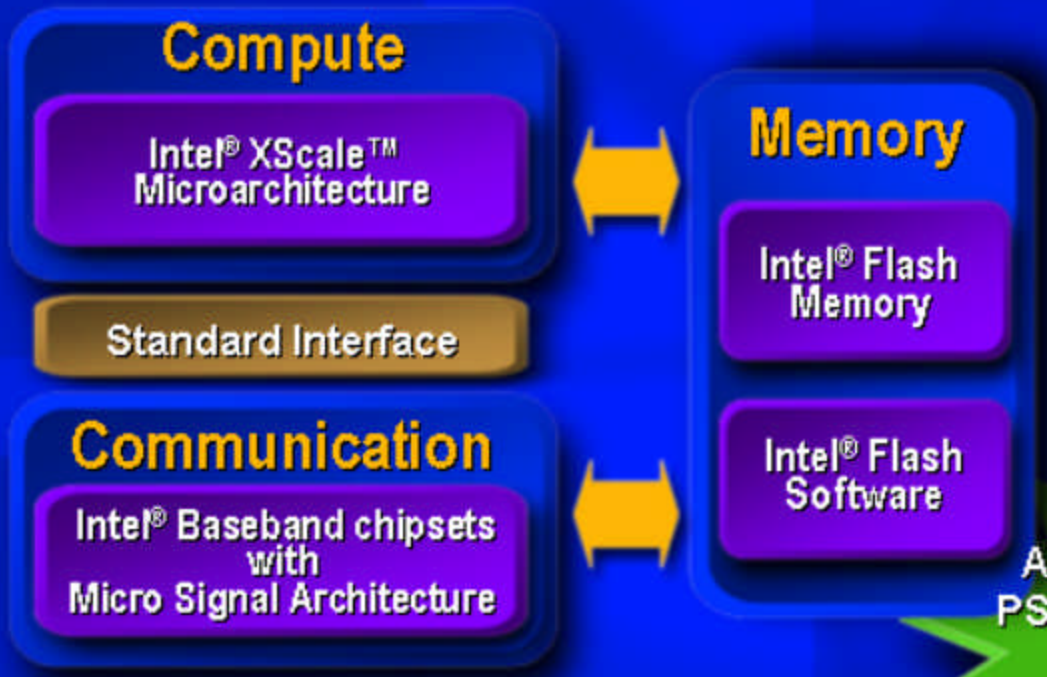
Launched: Spring 2002:
Intel® PXA250 and PXA210 Processors



Intel® PCA Memory Subsystem

MIPS

High speed burst I/F to keep the Intel® XScale™ Processor cache filled



Mbits

High density Intel StrataFlash® memory to store new features and applications

Announcing New PSM & FDI Software

millimeter³

Code and data in a single chip

milli-watts

Lower power code execution direct from Flash, not RAM

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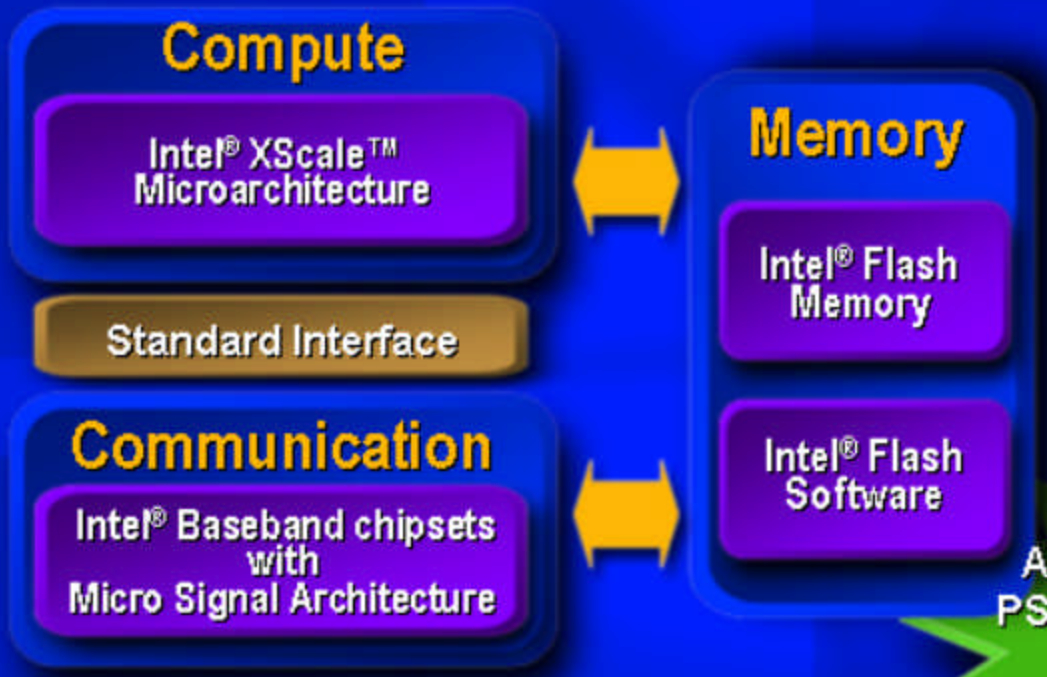
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High speed burst I/F to keep the Intel® XScale™ Processor cache filled

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High density Intel StrataFlash® memory to store new features and applications



Announcing New PSM & FDI Software

millimeter³

Code and data
in a si

milli-watts

2M / 2m

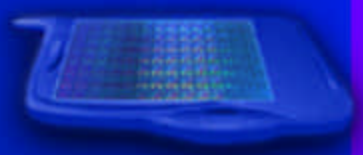
Mips ·Mbit / Milliwatt millimeter³

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Convergence
Future Path of Integration



Multi-chip product (MCP)
- #1 supplier of stacked Flash products
- Stack Intel Flash and Intel® XScale™ processors



Wireless Internet on a Chip
- Flash, logic and analog on a single die on industry leading .13u process.

2M / 2m

Mips ·Mbit / Milliwatt millimeter^3

intel

Our Role:
Drive Convergence

today

Today:

IPP Libraries,
Compilers, VTune
PCA, IA-32, IPF

2003

Next Year:

Integrated SDK's:
"IA-32 / PCA"
"IXA / IA-32"
Plus threading tools…

Software College

Your Role:

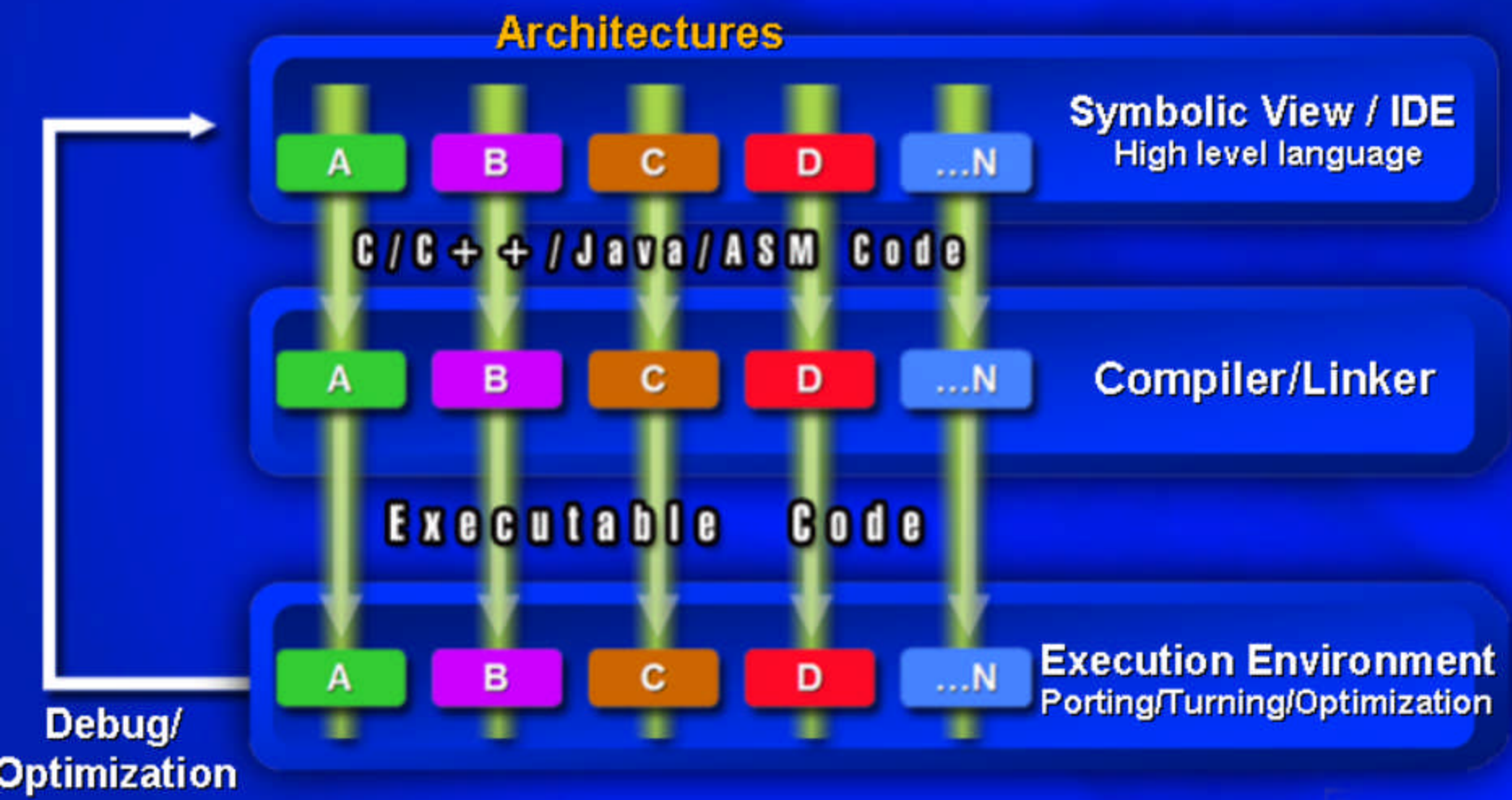
Create:
Device-aware apps
Mobile-aware apps

2003 and beyond

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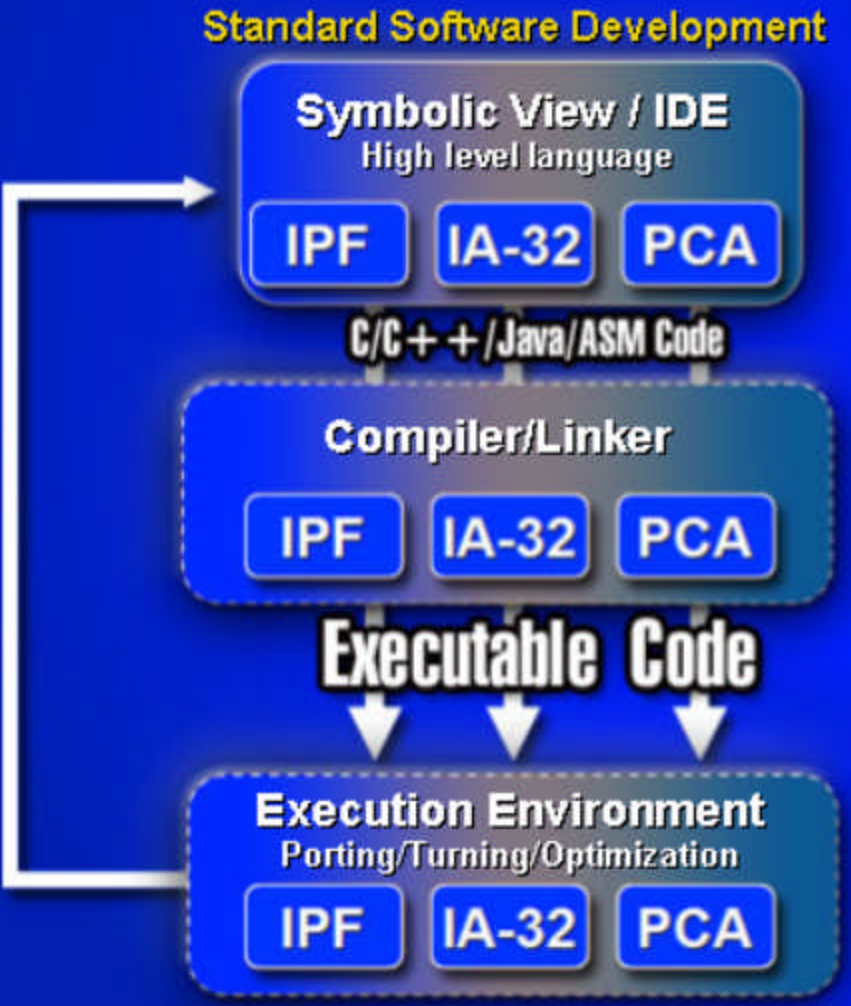
Software Development Complexity

Standard Software Development



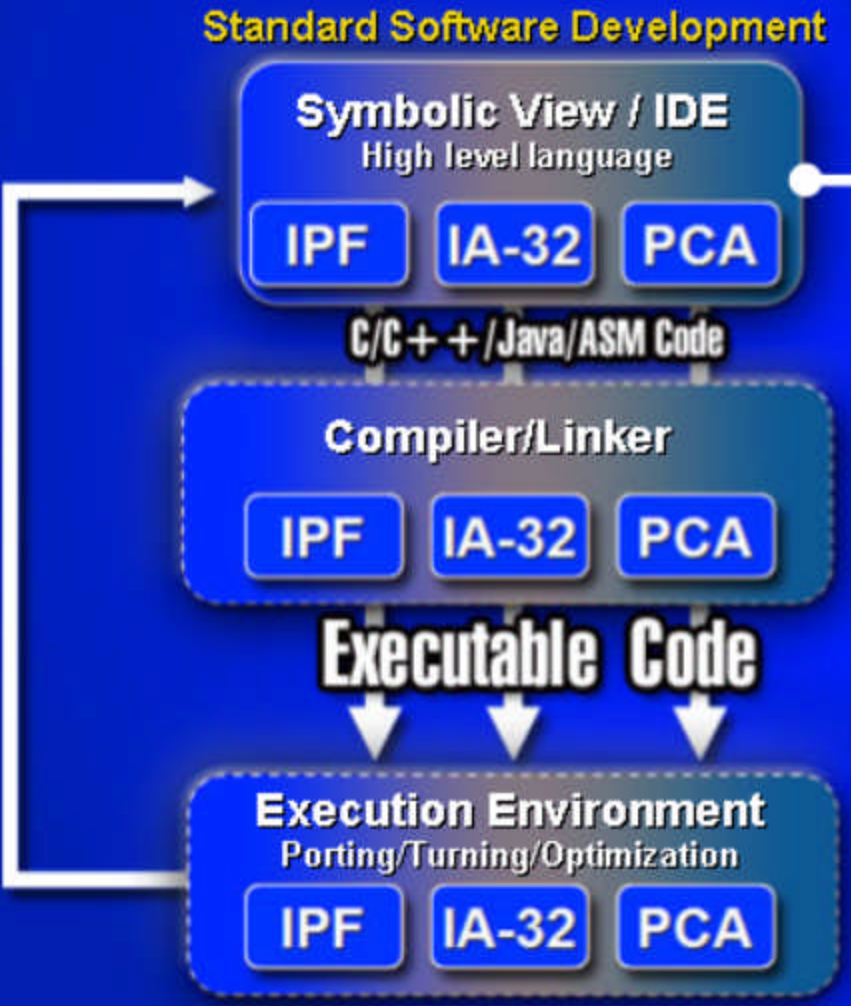
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Delivering Tools to Ease Development Across Intel Architectures



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Delivering Tools to Ease Development Across Intel Architectures

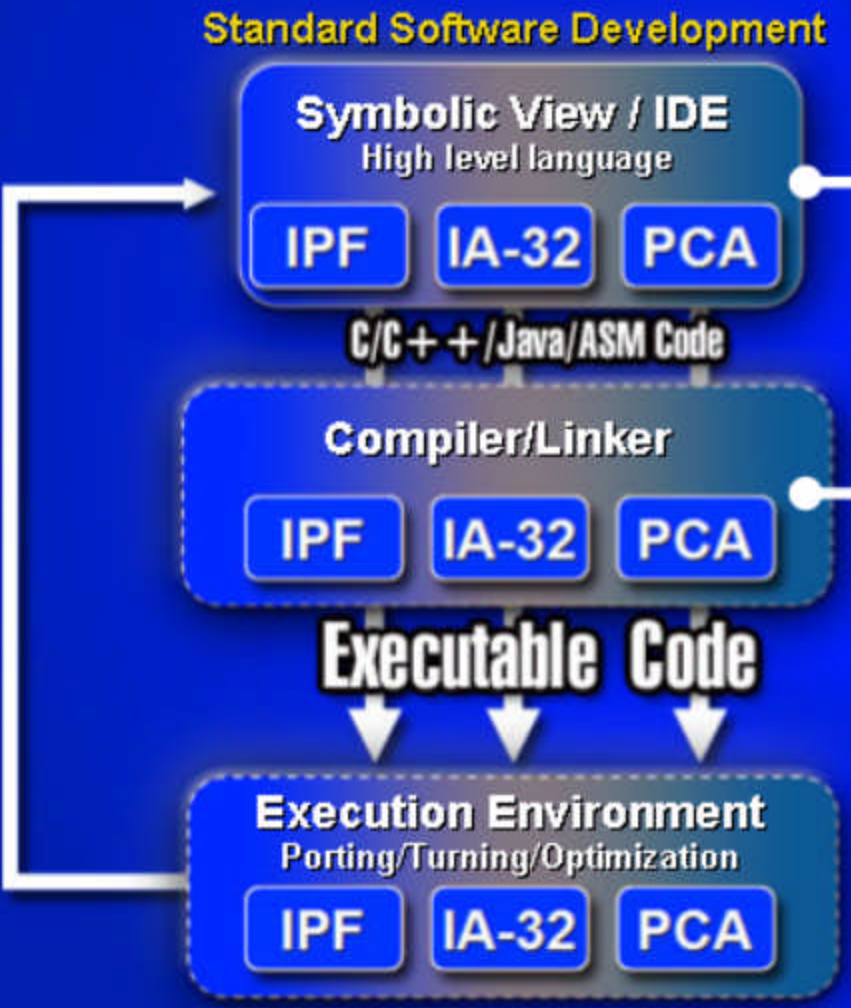


Intel® Integrated Performance Primitives

Common Source Code Across Platforms

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Delivering Tools to Ease Development Across Intel Architectures

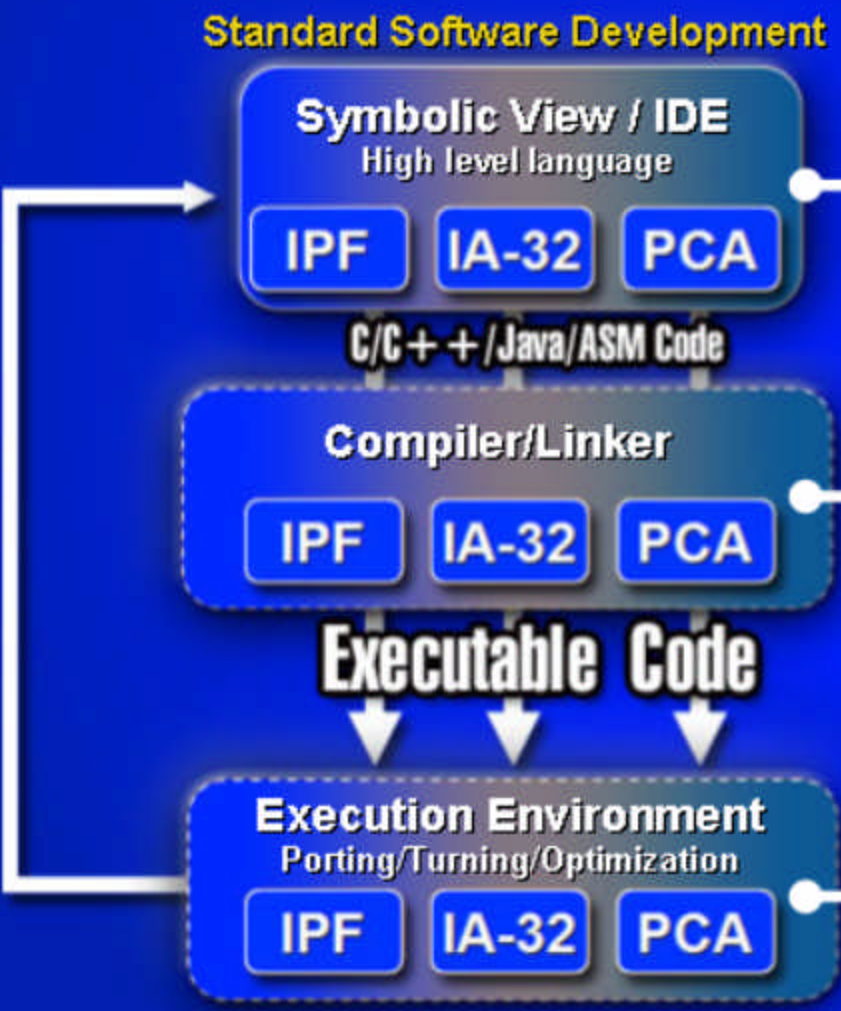


Intel® Integrated Performance Primitives
Common Source Code Across Platforms

Intel Compiler
Common Technology for familiar development environment across architectures

intel

Delivering Tools to Ease Development Across Intel Architectures



Intel® Integrated Performance Primitives

Common Source Code Across Platforms

Intel Compiler

Common Technology for familiar development environment across architectures

VTune

Optimization Tools with same GUI for All IAs

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Working With Leading Tools Vendors



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Announcing Intel®
Wireless MMX™ Technology



WIRELESS MMX™ TECHNOLOGY

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Convergence in Hardware and Software



Our Opportunity:
Any Device, Anytime, Anywhere

- Vision
- Industry Collaboration
- Standards
- Products

Intel Developer Forum

Fall 2002

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AlertVIEW, AnyPoint, AppChoice, BoardWatch, BunnyPeople, CablePort, Celeron, Chips, CT Media, Dialogic, DM3, EtherExpress, ETOX, FlashFile, i386, i486, i960, iCOMP, InstantIP, Intel, Intel logo, Intel386, Intel486, Intel740, IntelDX2, IntelDX4, IntelSX2, Intel Create & Share, Intel GigaBlade, Intel InBusiness, Intel Inside, Intel Inside logo, Intel NetBurst, Intel NetMerge, Intel NetStructure, Intel Play, Intel Play logo, Intel SingleDriver, Intel SpeedStep, Intel StrataFlash, Intel TeamStation, Intel Xeon, Intel XScale, IPLink, Itanium, LANDesk, LanRover, MCS, MMX, MMX logo, Optimizer logo, OverDrive, Paragon, PC Dads, PC Parents, PDCharm, Pentium, Pentium II Xeon, Pentium III Xeon, Performance at Your Command, RemoteExpress, Shiva, SmartDie, Solutions960, Sound Mark, StorageExpress, The Computer Inside., The Journey Inside, TokenExpress, Trillium, VoiceBrick, Vtune, and Xircom are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

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